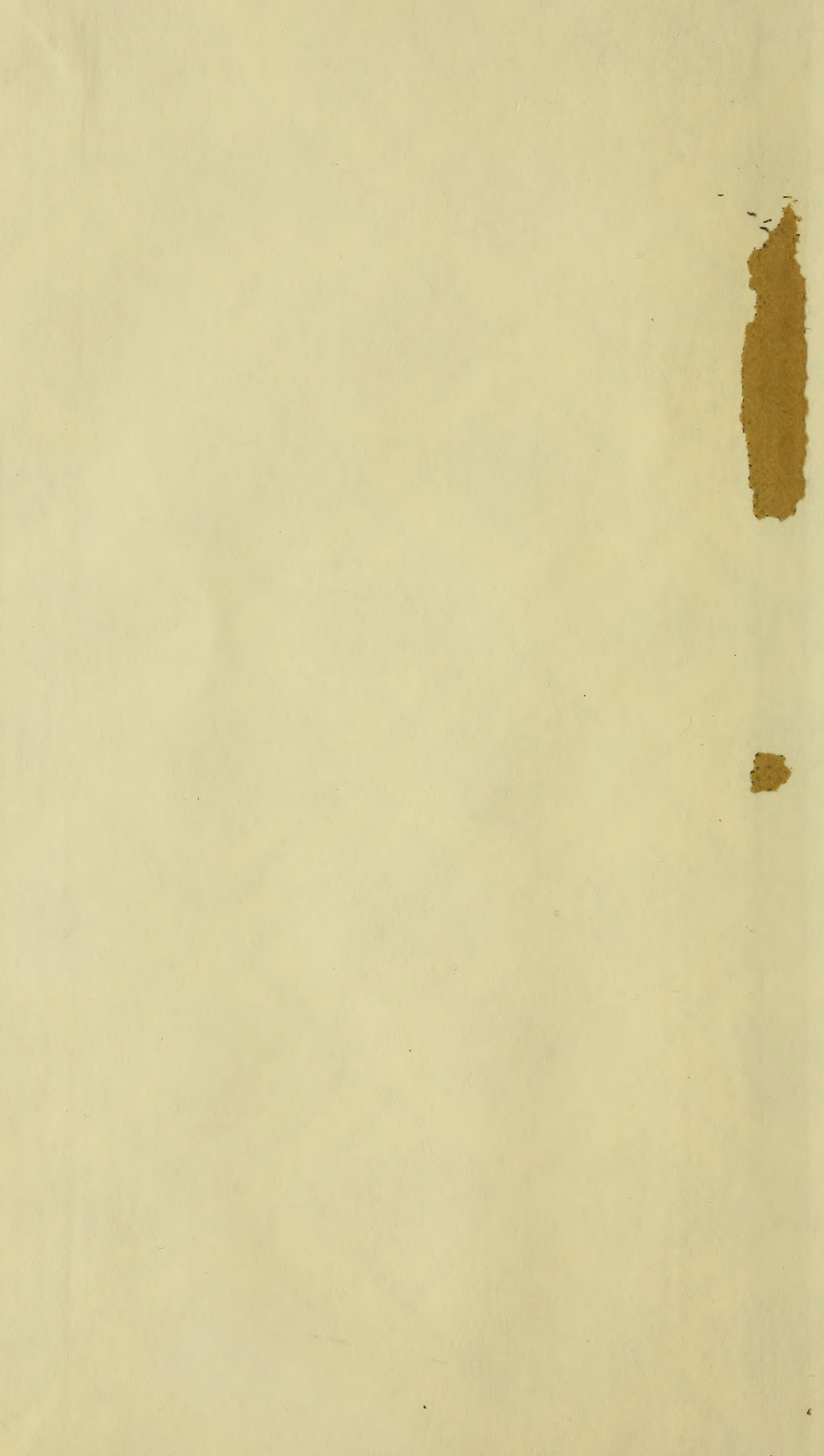


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H 59
Varieties . .

—AND—

Methods of
Cultivation

—OF THE—

FRUITS OF THE SOUTH.

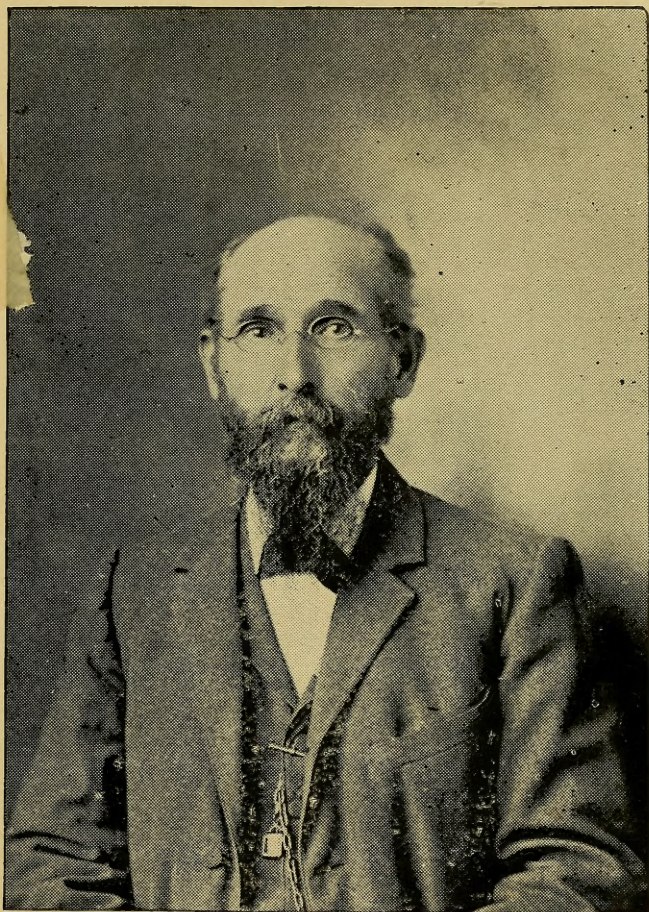
—BY—

HEWETT BROS.

HAMMOND, LA.

Also Catalogue and Price List
of Trees, Plants, Bulbs, Etc.
grown and for sale by the

HAMMOND NURSERIES.



CLARK HEWETT, SR.

35 Years a Nurseryman.

OUR INSTRUCTOR.

Hewett Bros., Hammond, La.
vi
.. VARIETIES ..

—AND—

METHODS OF CULTIVATION

—OF—

.. Fruits of the South ..

—FOUND AT—

HEWETTS' NURSERIES,

HAMMOND, LA.

CLARK WARD HEWETT, JR. B. WADE HEWETT,
M. VERNE HEWETT,

—*Proprietors.*—

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INTRODUCTION.

WE SINCERELY BELIEVE that much of the failure to grow long lived, fruitful trees, is caused by poor drainage and use of wrong fertilizers. We therefore introduce our catalogue by taking space to consider these important subjects.

There are very few soils in Southern Louisiana, but need artificial drainage; drainage not less than three feet deep, and the deeper the better.

Drainage.

The good effects of proper drainage are many, its first effect being to remove the possibilities of stagnant water, which if permitted to remain will certainly injure or destroy every element of plant food suitable to tree growth within its reach; this destructive effect comes from the asciduous fermentation, which, under the high heat of our climate, soon develops—but arrange to promptly remove surplus water from the sub-soil and it maintains a porousness into which air with its plant food enters and by which chemical action affiliates with food substances for plant growth, this porousness also maintains a looseness of subsoil which readily responds to the loosening effect of cultivation, to the loosening effect of manures and the developement and maintainance of humus. The whole condition finely fitted for healthy deep root growth and favored by such conditions, strong healthy roots do go down and safely underpin the top structure. On the other hand, let stagnant water fill the subsoil to, within say one foot of the surface, and conditions stand nearly opposite to the good ones above named; the machanical condition of subsoil being soggy and hard is unresponsive to manures, air or cultivation. Under such conditions a few roots of medium size will grow, keeping close to the surface, while a mass of fibrous roots will grow and interlace, always close to the surface, and often protrudings; deep root; shallow root; results in the surface root feeding on the surface soils which usually possessing a larger share of nitrogenous food, stimulate to a quick luxuriant growth of tops, and masses of roots unhealthy in structure and readily beset with funguous and insect enemies; on the other hand, the deep root not only feeds on surface substances, but brings up from below the more mineral and solid substances not secured by surface roots but absolutely necessary in the economy of wood structure to establish healthy wood, greater immunity from disease longer life and better fruit.

Planting the Orchard.

To better illustrate the practical use of drainage, let us consider steps to take in planting an orchard.

We select the highest ground because of better drainage, but so fine grained are most soil in Louisiana that when packed by rains they hold water in depressions on high land as completely as on low—the ground plowed and dragged, lay it off and stake according to number of trees to plant per acre—with plow backset to line of trees as established—dig holes fifteen inches across by fifteen inches deep, loosen subsoil in bottom of holes—fill up holes to within eight inches of the surface with good surface soil—if you plant one year trees, cut off all side roots to center root (called tap-root) and cut this to eight inches length from the collar—cut top to four inches length from collar, you have a stub twelve inches long—plant so the collar will be a little below the surface—use no manure when making holes or planting stubs. Another system for trimming larger trees—cut off all fibrous roots leaving the heavier roots; cut back stem of tree to two foot from collar and plant—the roots should at all times be kept damp; and well wet when planted. Now the drainage—by backsetting to the rows of trees gives a drain between the rows; these drains lead to drains at either end of rows of trees; these end drains again to deeper drains dug on either side of the orchard; these main drains should lead to low lands, drains or creeks. This plan of drainage is for a comparatively level place—for rolling or side hill lands the styles would vary according to need. In first locating the orchard plat take every advantage possible to secure the best drainage—every writer on fruit growing emphasizes the necessity of perfect drainage, and we hope what we have here said will increase interest in this very important subject.

Fertilizers to Use.

In expressing our our views on this subject we realize we run counter to prevailing opinions, we also realise that opinions are often errors—writers on fertilizers state that complete manures contains nitrogen, phosphoric acid and potash,—nitrogenous fertilizers like nitrate of soda, cotton seed meal, fish scraps etc., are highly stimulating plant food, while potash and phosphoric fertilizers, like cotton hull ashes, wood ashes, lime, kanit, etc., produce the mineral and more solid substances in plant growth. Among nurserymen and orchardests it is an admittted fact that fruit trees highly stimulated to rank growth by use of nitrogenous manures and high cultivation are not so healthy as trees grown by good cultivation and by using manures strong in potash. It is also maintained among experianced fruit growers that fruit of the best quality cannot be had without liberal use of mineral manures. We must there-

fore conclude to grow fruit trees and small fruits with the best success, nitrogenous fertilizers should be used sparingly and potash and phosphoric liberally—we would therefore object to sowing cow peas, clovers or any nitrogenous producing plant on lands growing fruit trees or small fruit, for the reason that the soil itself together with cultivation will furnish an abundance of nitrogen needed for healthy growth of these plants—we would use barn-yard and other composted manures (much cheaper and better than any so-called “commercial fertilizers”) never using nitrogen in any form in making the compost, but lime, ashes, salt, kanite, etc.

The most ordinary barn-yard manure contains about 1 part of nitrogen to 1 part potash and $\frac{1}{2}$ part phosphoric acid, hence we see, if we use our best caution to eliminate nitrogenous manures, we yet have a good supply in any composted manures we can make, besides the nitrogen present in the soil and placed there by cultivation. As evidence in line with our conclusion we quote from some of the best authorities known on the subject of fruit growing:—Prof. L. H. Bailey, Experimental Station, New York, “Potash is the chief fertilizer to apply to fruit trees, particularly after they come into bearing, phosphoric acid in the second important fertilizer; nitrogen promotes growth and should be used with caution; trees should be grown for fruit rather than for timber.”—G. G. Atwood, Extensive Nurseryman and Fruit Grower, New York, “We have never seen good results after use of ordinary commercial fertilizers, we like barn-yard manures; wood ashes and lime never fails us.”—State Experimental Station, South Pines, North Carolina, published the following formula: To make a fertilizer for fertilizing fruit trees and vines, 10 pr. ct. potash; 5 pr. ct. phosphoric acid; $2\frac{1}{2}$ pr. ct. nitrogen (note the small pr. ct. nitrogen and large pr. ct. potash). A long list of evidence on this line could be given, all reaching the conclusion that the best fertilizers for fruit trees, vines or strawberries, is A FERTILIZER RICH IN ALL THE ELEMENTS OF PLANT FOOD EXCEPT STIMULATING NITROGEN. For not only does nitrogen produce a spongy wood, but in all its uses it is the harbor of fungus and insect enemies (while potash and phosphates largely repel such pests). Cow peas are sown in an orchard to produce nitrogen food for the trees, we think it is in evidence that nitrogen is furnished in abundance without this supply, but how about insect conditions attending this supply; it is known that the nitrogen stored among roots of cow peas is the product and home of numerous self-producing microscopic insects and as the nitrogen and insects have immediate contact with the minutest roots of the fruit tree the conditions may reasonably be supposed to be one source of fungus and insect life destructive to our fruit tree. The sudden and apparently unaccountable death of our plum, peach and other trees, root and branch,

indicate such a cause (analogous to destruction of fruit plants by phylloxera, etc). For like reasons we believe bone meal objectional as a fertilizer for fruit trees and strawberry plants, while it is strong in phosphoric acid it has a good per cent of nitrogen derived from a gelatinous substance in rawbone, which substance is the ready source of fungus and insects.

Before closing this chapter on fertilizers we wish to emphase the great value of wood ashes as fruit plant fertilizers. Wood ashes contain every ingrediant needed by plants except nitrogen, carbonic acid and water. Carbonic acid is liberally supplied from the air so it maybe said, WOOD ASHES SUPPLY ALL FOOD NEEDED FOR PLANTS, EXCEPT NITROGEN, IT IS; OF GREAT VALUE.

We close the chapter on Drainage and Fertilizers; two subjects of great importance; all our views may not be correct.—Read and Judge.

Cultivation, Trimming, Fertilizing, Etc.

Considered In a General Way.

Cultivation should begin as early in March as ground will permit, observing not to cultivate when ground is sticky, if ground is somewhat wet cultivate during latter part of the evening, not in the morning; the Planet Jr., Cultivator with its combinations is a fine orchard tool, but the hoe must do the work close to the trees,—use short whiffleters and wind end next the tree with cloth; place no mulch of any kind about the trees, proper cultivation will do more to retain moisture than mulch.

Cultivation will cause roots to go deeper, fertilize the soil, and hinder insects; mulch will encourage surface root (all wrong) and invite insects. Cultivate promptly after showers; it is of special benefit; the more intense a drouth the more the hoe and cultivator should move; if earth is stirred to dry dust about the trees all the better. Stop cultivation about September 1st., especially in Satsuma orange and Fig Orchards.

Bearing Orchards.

Cultivation should not begin much before buds break and blooms appear. Early cultivation would cause early blooms and more risks from frosts; active cultivation of thrifty growing trees may cause them to drop their fruit; trees not thrifty, can stand intense cultivation and improve its fruit; cultivation should be most active up to the time the fruit matures and should cease by September 1st. Remember you cultivate to help your trees grow and make fruit, not to kill weeds, hence thorough and frequent cultivation.

Trimming Fruit Trees

has two principal objects—to give form and aid in producing fruit. Form is largely a matter of personal taste, with us the tree with 1 to 1½ feet trunk with a low broad but open upright top, is the ideal tree. Some prefer a high top for better convenience in cultivation, but the man at all skilled in use of tools easily manages the low top. The low topped tree is less racked by winds, fruit easier picked, trunk better protected from various causes of injury and trimming easier done. We like low tops. Trees vary in style of growth, some can easily be formed others not; two to three years is required to establish the orchard with well formed trees. Make up your mind to the form of tree you wish and trim according. The first year this will require special attention during the growing season, the main or heavy trimming should be done in December when growth is suspended, but knife should be in hand any time of year to lop off suckers and unsightly shrubs. Orchard established in size and form the part that trimming has to do in producing fruit is in order to consider.

An orchard may be made to grow wood instead of fruit; cultivation, fertilizing and trimming each have bearing as to which shall be produced. An orchard handled to make a steady reasonable growth by which is secured well matured wood with well developed fruit buds, is the mark to aim at. Orchardists have found that excessive trimming is not the thing for fruit; the best results come from leaving spurs and small limbs throughout the tops, cutting out when limbs crops or grow awkward or a little more sun is needed. For fruit, a weakly tree (which means weak roots) is helped by reasonable trimming; a vigorous growing tree if trimmed would likely increase wood growth at the expense of fruit; if too vigorous, diminish fertilizer and do not trim. Each kind of fruit tree will need special trimming which will be noticed when considering each variety.

Fertilizers.

As before intimated, we believe nitrogenous manures should be kept out from all manures used among fruit tree, as far as it is possible to do so; that then there will, unavavoidedly, be furnished all such fertilizer needed for healthy plants and good fruitage. On the other hand manures especially strong in potash accompanied by phosphoric acid, should be used. The best, most lasting and cheapest manures for fruit purposes, where manure has to be broad casted to enrich the soil, are composts made from barn-yard manure, leaves, mulch, etc., composted with ashes, lime, salt, kanit, etc. Wood ashes, kanit, lime, any potash or phosphoric substances in suitable form, are fine top dressing about fruit trees, but no barn-yarn manure, cotton seed meal, nitrate

of soda, or any specially nitrogenous manures should be used and because of the fungous conditions likely to accompany bone-meal, we would not use it. We must remember that proper drainage and cultivation go a good way toward fertilizing and therefore, in applying fertilizers the apparent thrift of the tree must determine the amount of fertilizer to apply. Again we must remember it is not the purpose to push a luxuriant rapid growth, but a steady healthy growth, in other words, we direct the growth of fruit trees for fruit, not for timber.

Injurious Insects, Etc., and Remedies.

This subject is too extensive to be treated in this little catalogue and we refer you to the Bulletins issued from State Experimental Station, which can be had by asking and which covers the questions on these subjects. Address, H. A. Morgan, Baton Rouge, State Entomologist, or the Agricultural Department, Washington, D. C.

A healthy tree is not near as like to be attack from insects, etc., as a sickly one; hence the profit in proper drainage, proper fertilizers and proper cultivation.

All kinds of potash manures and most kinds of phosphoric manures promote a healthy growth in fruit trees and to quite an extent are destructive of fungous and insects. (The opposite of nitrogenous fertilizers which promote a spongy growth and invite fungous and insects.) The fruit borer, which does so much vast damage to fruit trees, can be much hindered in its work and often driven from the field by liberal use of wood ashes about the collar of the trees. A healthful fertilizer and insecticide is secured by using 2 quarts ashes, 1 quart lime, 1 pint salt.

In December remove earth from collar of trees, apply ashes well upon collar first and follow with lime and salt and cover lightly with soil. White wash is another invigorator and insecticide.

To a pail of white wash add $\frac{1}{4}$ pound blue-stone and one spoonful Paris green. Sometime before the leaves come, scrape dead bark from your trees and apply this wash thoroughly to trunk and main limbs of the tree. The so-called "Bordeaux Mixture" is healthful to various kinds of plants and destructive of insects. It is used in form of liquid and applied by spray pumps. The mixture consists of: 4 pounds of blue-stone, 6 pounds of slacked lime and 50 gallons of water. Desolve the blue-stone by placing it in a bag in 4 gallons of water; slack the lime in 4 gallons of water, strain and mix and add 50 gallons of water.

It should be kept in a tight vessel when not in use. This mixture is more for fungous diseases, but if we wish to make it destructive of insects add $\frac{1}{4}$ pound of Paris green to the 50 gallons.

Spray pumps of different styles are kept by seedsman, the knapsack style is very convenient. "Kerosene

Emulsion" stands at the head as an insect destroyer, but somewhat difficult to make. As before intimated more than half the battle against insects and fungous diseases is won when fruit trees are grown with healthy root, healthy stems and healthy tops. To show causes of failure in growing fruit trees we have encroached on the room in our little catalogue and tried, as we see it, to show "the better way." Read and judge for yourself.

Business Card.

From much experience as nurserymen we believe we know how to grow healthy nursery stock. How stock should be dug, how packed and shipped. How to conduct a business just to our customers and just to ourselves. We warrant to deliver well graded goods in perfect health, but cannot warrant against failures that may come from the want of knowledge on the part of those who plant. We can make mistakes, but will most gladly and quickly make the best amends possible upon proper information, and most urgently request any person who thinks he has charges against us to at once inform us and thereby not permit any misunderstanding to grow. We want to sell you goods for our life, pleasure and business is to grow and sell fruit tree and believe every family healthier, more intelligent and happier by their orchard, their "vine and fig tree;" and if you buy of us we wish you to carefully consult this catalogue; get all the good you can from it and then write us on any matter not clear to you and let us help you if we can. If you have tried and failed don't be discouraged. Experience must be our teacher; be interested. Plant fruit trees and care for them with all the good sense used in growing cotton or corn; you CAN SUCCEED for sure it is, fruit raising is rapidly increasing in the South.

Start at least with a home orchard, it will teach you how to handle a commercial orchard. With best wishes for all planters and lovers of fruits and flowers, we submit our little catalogue believing you will find herein an assortment of plants to please you. See our agents; visit our nursery, write us.

Yours truly,
HEWETT BROS.,
Hammond, La.

Peach Trees.

We believe you buy, plant and grow fruit trees for fruit and not for timber, so we again speak for good drainage, good cultivation, etc., with wood ashes, lime, kanit, salt, etc., for top dressing about your trees. No bone-meal, cotton seed meal, no barn-yard manure, nitrate of soda or other nitrogenous fertilizer. Remember this system of growing fruit trees applies to all kinds and we will not repeat.

Seedling Trees Better Than Grafted.

Why? They live longer. This covers the claim in favor of seedling. But consider! Do you remember the wretched condition in which grafted trees have come to you? We remember of seeing a car load of fruit trees brought to our neighbors, handled in the car without a scrap of protection to the roots. They were from 8 to 10 days en route, it took several days to dig and pack at the nursery and several more to deliver to customers. Can anyone knowing how quick roots are injured by exposure to air and sun doubt the worthless condition of these trees, yet they were nearly all taken and paid for by the buyers. "Disatisfaction" will not express the sentiment which followed the planting of these trees. Some armed themselves with two dogs and a gun for reception of the next fruit agent. The seedling tree never has such experience as the above. It usually grows where the seed is planted, if treated as this car load lot it would come out no better. Budded trees properly handled should do equally as well with seedlings to say the least. All budded trees had a seedling parent selected probably from a lot of seedlings because of its superior thrift and fruit. Take fifty Elberta peach trees, handle them right and plant beside fifty seedling trees and we venture the assertion that the Elberta orchard will outlive the seedling orchard. We think so because we know that a good share of the seedlings will prove weakly and of short life, while we know the Elberta has a record for health and long life and as to fruit, we would venture to place the profits of five Elberta trees against the profits of the fifty seedling.

Thousands of seedling peach trees might be raised before you secured one equal to the Elberta; this idea that seedlings produce the best orchards has been claimed by some all along in the progress of fruit culture; but today in the great orchard sections of our country a man who would plant a seedling orchard would be pitied sure. Seedling trees seldom produce superior fruit and the trees are often of inferior habit and short lived. It is claimed the so-called "Indian Peach" is true to its kind. An assortment of good grade peaches of this habit would be all right, such seed would start an orchard at small expense. But as it is, and like to be, the budded peach tree, thrifty in growth and lucious in fruit are

surely the trees to plant. During the first two years you can trim the trees to the form desired, after that little trimming is needed. Some heading of limbs growing beyond the form you wish, removal of limbs that cross or are too thick, but plenty of spurs and small limbs should be encouraged, bearing in mind that in all the operations in managing your orchard you must aim to secure a certain health and growth of wood the most favorable to produce fruit. A growth neither too rank or too weak. Our list is not extensive, but every one is fine and gives a nice succession of fruit from earliest to latest and also takes in the best for commercial orchards.

Sneed. Fruit good size, color creamy white, with rich blush on sun side. Ripens evenly to pit; flesh white, very juicy and sweet; valuable because of earliness and fine shipping qualities, succeeds from Texas to Florida, earliest good freestone peach.

Triumph. A surprise to peach growers. The earliest yellow freestone known (June 1st.) an abundant bearer, blooms late hence a sure bearer; fruit large and very small pit; quality the best; good keeper and shipper.

Greensboro. Another surprise. Larger and earlier than Alexander; flesh white, juicy, extra good shipper, perfect freestone, color crimson shaded yellow.

Alexander. The old standard early peach, large, high colored, flesh greenish white; juicy, clingstone, good. June 1st.

Mamie Ross. The rival of Elberta, nearly as large; a great and sure bearer, color white with red cheek: quality best. A grand table and market fruit, freestone.

Mountain Rose. Large, one of the best and most reliable of early peaches; white suffused with carmine; flesh white, melting, rich, a vigorous and productive tree, freestone.

Elberta. Very large, yellow with red cheek, flesh yellow, juicy, high flavored, does well every where. Probably more Elberta trees plant for last few years than all others; excellent home peach and leads all others in the market, freestone.

Crosby. Not surpassed in quality, juicy, sugary, delicious; none better, color deep yellow flushed with red. A very late bloomer and sure bearer; strictly a home fruit, freestone.

Crawfords Late. A standard sort which holds its own with the best. Large, skin yellow with red cheek, flesh yellow and fine quality, freestone.

Stump the World. Very large. Another standard sort, skin creamy white with red cheek, flesh white, juicy, excellent. Fine for home and market, freestone.

Old Mixon. Yet another standard sort. Fruit large, white with red cheek, quality excellent, very productive, very prolific and sure; fine shipper.

Wonderful. Very large late peach. Color deep yellow with carmine cheek, flesh yellow, firm and fine quality. A good keeper and shipper.

Matthews Beauty. A Georgia seedling tree as hardy and thrifty as Elberta, larger in size and better in quality. Equally as good shipper. Color yellow streaked with red; flesh firm, rich, excellent. Freestone. Season First of August. Probably the most valuable peach yet produced.

Plums.

The Japan sorts are a grand gift from the Japanese and an especial favor to the South. At Hammond good and poor results have accompanied its planting, according to management. With wet feet, poor cultivation, etc., "poor luck;" of course; while with fair attention \$1.50 to \$4.00 per bushel has been realized at Chicago and New Orleans. Their large size, great beauty, fine taste and great shipping quality make them THE commercial plum; so far Japan plums from here when fairly handled, have captured first prices at Chicago; and when planters realize that but small sections of the United States can produce good plums, that our crop will be the first to place in market, transportation shorter than our California or Florida competitors, the planting and proper management will begin. European sorts of plums are of no good here; the Japan and some native sorts are successful. The plum and peach are troubled with curculio and rot of the fruit. Will consider these subjects later on. We think the plan of low, broad, open, upright heads are just suited to Japan plum trees. They are strong growers and need shortening in and thinning of tops every year. Thin to remove any dead or unhealthy twigs; they are young and great bearers and the importance of thinning the fruit (often to over half the set) must be understood and acted upon; not only for health of trees and better fruit, but as a preventative to the rot. There is quite a list of Japan and native plums; we give the best approved sorts including early and late and best for shipping; they are described about in order of ripening.

Red June. Unequaled among Japan plums for market, ripens ten days or more before Abundance, color purple-red with blue bloom; a beauty; flesh yellow, solid, sub-acid, juicy, rich flavor, very seldom rots.

Abundance. Among a large list of plums of early introduction the Abundance is ahead for quality and a profitable shipper, round with pointed apex, skin yellow grained purple and a darker cheek; flesh yellow, juicy, with apricot flavor, quite firm meat, quality best. June 10th to 20th.

Burbank. Fruit large, tree strong growing and spreading, color dark-red; flesh yellow, juicy, rich; a good companion to Abundance, little later.

Bailey. Fruit large nearly round, color rich orange overspread with cherry-red, showing minute orange dots. Flesh yellow, thick and melting excellent quality tree much resembles Burbank, but more up-right and better formed. All around better than Burbank. Ripens a little late.

Chabot. Fine shipper, fruit large, conical, color pink-red with many fine gold dots, flesh yellow, solid, quality good; ripens with Bailey.

Satsuma. Fruit averaging large, nearly round, conical with deep suture, color dark dull red dotted all over with greenish dots, firm red meat, juicy, quality good, keeps a long time and is gaining credit as a market plum; when canned the fruit has a peculiar and very agreeable taste.

Wickson. A remarkably handsome and very large, plum, deep maroon red, pointed, flesh firm deep amber yellow, juicy and highly flavored; quality best, a long keeper and retains its beauty and quality for days upon the market. Ripens 1st. of August.

Kelsey. A remarkable large, late fine plum; inclined to bloom early yet seldom fails to produce some fruit; this year it rather leads in quality; heart shaped and pointed, color greenish yellow, over-spread with blue blooms, flesh very solid, yellow, rich, juicy, of excellent flavor. Season middle to last of August.

Hale. The best late plum yet introduced large size, usually lop-sided, deep cherry red with yellow, juicy, with a very delicious sprightly peachy flavor. One party in Georgia has planted 10,000 trees and continues to plant. Last of August.

We are testing new plums of promising merit.

Native Plums

do best if planted in groups of two to three kinds, they naturally assume a low broad head inclining to too dense a top; a thinning of the top especially the centre will improve fruit.

Milton. Large red production; 10 days earlier than Wild Goose and a better plum in quality and for shipping, quality good, valued for its beauty and earliness.

Wild Goose. Fruit good size, bright red. Juicy, sweet, tree a vigorous grower, profitable, early shipper. June the 15th.

Mariana. Good size round red plum, reliable when planted with Milton. Root of Mariana is the stock mostly used by nurserymen on which to bud other plums.

REMEMBER. Whoever recommends nitrogen and ammonial fertilizer as a principal fertilizers in making fruit orchards certainly disregards the best interest of the tree and best interest of the plants.

Pears.

We confine our list largely to the so-called "Sand Pear." Varieties which have proven specially adapted to the South. A few years ago great hopes were placed in profits from growing pears but the blight which killed the trees, wrecked their hopes. The blight is not a new enemy in pear culture, probably not a section in the United States where pears are grown, but have suffered by it. The cause of blight is an open question; the general accepted theory is that it is caused by a microbe (a minute insect seen early by use of a microscope) which appears to always accompany the disease; with us we lay the cause to unhealthy conditions of the tree. The microbe acting by permit of such conditions and is not the first cause. It seems all life, animal and vegetable, is subject to destructive attacks from existing enemies whenever condition make an attack possible; in case of blight a physical degeneracy from some cause has been produced inviting increase and destructive activity of the microbe. We infer that the microbe is an accompanying principal in the life of the tree, helpful to growth in health and only destructive when unhealthy conditions are brought upon the tree. Sometimes you see a healthy tree amid blighted comrades; we observe that soft growth of limbs, spurs and blooms invited the microbe in each case, yet some force behind this invitation repelled the microbe from the healthy tree; it was the force from healthy conditions which only permit the microbe to act in conformity with health conditions. Blight is contagious; this might suggest that the habitude of the microbe is normally exterior to the tree, but after destroying the tree and increasing its broods by millions it instinctively leaves the dead wood for fresh fields to work and by its own powers or by wind and insects it reaches other trees. Frost is a leading cause acting upon the pear tree to bring conditions for blight, if the wood is well matured it will take unusual hard freezing to do injury, but if immature the injury will be relative to immaturity and degree of frost the final degree of injury sustained by the tree marks the degree of blight which may follow.

Observe there was very little blight among our pear trees prior to 1895, according to bulletin issued by Dr. Wm. C. Stubbs, Director of State Experimental Stations; for year 1894, no mention is made of blight of pear trees at either the three Experimental Stations; but bulletin for year 1895 (year of the great freeze) says "no signs of blight at Audubon Park;" for Baton Rouge "blight appeared during the year at this orchard;" for Calhoun "blight is very destructive;" now the maturity of the

wood at these three stations, at time of the freeze, was practically the same so the different degrees of blight reported by the bulletin corresponds and was caused by the different degrees of cold at the different stations, Calhoun being subject to greatest cold and greatest blight; Audubon Park the least cold and least blight; Pear trees grown from cuttings or buds since 1895 showed blight to some extent in 1896, probably because buds or cuttings were taken from trees with blight; This season no blight appears among young pear trees and very little among old trees, although many of these old trees were nearly annihilated by blight during two years following 1895.

We believe perfectly healthy trees means perfect blight proof trees: but perfect health in the animal or vegetable kingdom is hardly supposable. The nearer we approach perfect drainage, perfect fertilizing, perfect cultivation etc., the nearer we approach to perfect health in trees and to perfect freedom from blight. but if blight has captured the tree much can be done to arrest it by careful attention to drainage, use of mineral fertilizers, strong whitewash etc., Whatever tends to moderate well matured growth is an antidote for blight; the removal and burning of dead and diseased parts is all right as far as it goes, but this does not reach the disease pervading the whole body of the tree, hence a constitutional treatment is, it seems to us, as important at least as removal of the diseased parts.

Whatever truth or otherwise these views may contain, they are our convictions and we take space to express them for the reason that this blight question should be discussed and true causes and remedies reached. The special advantages this section of country has over other sections of the U. S. for producing fruit for early markets emphasizes the need of better knowledge, that planters may have confidence and not think they waste time and money in planting pears. From experiment and observation we believe the blight can be readily controlled and the comforts to homes and profits in shipping possible to Pear culture be fully realized.

Trimming the Pear Tree.

Most pear trees have a strong upward growth especially the sand pear; if permitted to have their own way they will have such long slender limbs that when loaded with fruit they are sure to break down badly, seriously injuring the tree and wasting fruit, therefore the low open head gives the form; begin first season and cut out all large central limbs, next and next year do the same; you then have a tree safe from breaking. Convenient every way. As stated we confine our list largely to the sand pear family, however, we start the list with:

Koonce. Not fully tested on the Gulf Coast but where grown has made a record for best early pears. It combines earliness, freedom from blight and rot; very productive, large size, handsome and leads the market whenever offered; tree strong, upright, like Keiffer, fruit yellow with carmine cheek, all told well worth a trial.

Le Conte. Well known and very fine when properly handled; it should be picked when near ripening; placed in a cool dark room a number of days when it becomes fine indeed; the leading southern markets pear, perfectly adapted to Gulf Coast sections.

Garber. Ripens close after Le Conte and should be treated like it. A rival of Le Conte and Kieffer when better known. Tree is a very vigorous grower, a young and abundant bearer, fruit large, roundish, showy. Tree blooms late.

Kieffer. Has been a companion of Le Conte and in some sections more extensively planted. A very young and regular bearer, should be house ripened and will keep until December; very extensively planted especially in the north for markets.

Seckel. Small but exquisite flavor. The standard of quality among pears. We have found it doing well in Southern Louisiana. Tree a short robust but slow grower. These qualities help its success with us when most fruit trees grow too fast.

Golden Russet. The hardiest of all pear trees for the South, fruit only payable for hand eating but it is an excellent pear for canning. Fruit golden russet, apple shape. The tree is one of the handsomest of all pear trees; large luxuriant foliage which stands heat and drouth without injury; it bears fruit very young and every year; the tree is very ornamental, and of the sand pear family.

Duchesse de Angouleme. Is doing well in the south, one of the largest and one of the best pears; fruit often weighs a pound, greenish yellow and russet. Flesh melting, buttery, delicious, will keep until January if house ripened.

There are other good kinds of pears but we consider the above kinds specially deserving. Pears we can grow and fill the bill for home use and for market.

Oranges.

We are pleased to talk about oranges not that we have anything to say to materially aid the Gulf Coast orange people who have the orange industry established, but to bring before the planters occupying a range of country 50 to 75 miles wide paralleling the present orange district. The fact that they too can grow oranges, delicious as any grown in Florida or California.

This is possible because of the late introduction into this country from Japan of the Satsuma orange. The choice orange grown by that bright horticultural people. So many are fine qualities of this orange that it is being extensively planted in old orange sections and fast as known readily planted in a wide strip of country bordering the old orange belt. This signifies a power to resist bad effects from frosts not possessed by other oranges; a frost of 18 to 22 degrees destroys Florida and California orange trees; the Satsuma will be uninjured by a cold of 10 to 12 degrees and we are confident that a healthy, well matured tree will stand 8 degrees cold without injury. The Satsuma orange tree is of itself the hardiest known but propagated on what is called the Citrus Trifoliata, its hardiness is still increased. The trifoliata is a hardy lemon from the mountains of Japan and is not hurt by zero cold; it too is somewhat dwarfish in its growth, drops its leaves early in the fall and is slow to put out leaves in the spring. The Satsuma budded on this stock partakes of those qualities which further adds to its frost resisting powers. Bulletin No. 36, year 1895, of the Louisiana State Experimental Station, Dr. Wm. C. Stubbs Director, referring to the bad freeze of that winter (claimed to be the coldest of any year preceeding for 150 years) and its effect on the Experimental orange grove at Audubon Park; "no variety of orange tree or kind of stock except Satsuma and Kumquat orange on Trifoliata stock and one single bud of Tangerine also on Trifoliata stock survived."

This was all that was left as a remnant of one of the prettiest and healthiest groves in the State; at Baton Rouge all orange trees were killed except Satsuma and Kumquat on Trifoliata stock; at Hammond, winter of 94 and 95 over 2000 Satsuma trees were imported and planted; at least 30 per cent. surviving the freeze; this importation was yearling trees many of them quite immature; shipped from Florida, poorly packed; yet 30 per cent lived. Quite a number were on sweet stock which added to loss; an orchard of 60 trees 5 years old at Hammond bore over 75 bushel, fall of 1894; February freeze of 1895 killed one half this plant largely, as we believe, because of immature condition of the trees caused by high cultivation and fertilizing late in the fall; the sum of evidence at Hammond is conclusive that the Satsuma on Trifoliata is a success here provided the trees are well grown with well matured wood to meet the frost.

Northern Limit.

Starting at a point where the Boque Chitto River interceeds the Pearl, thence westerly to Amite City, thence westerly to Port Hudson, westerly to Opelousas thence due west to Sabine River, approximates the northern limit from the Gulf Coast at which Satsuma

orange trees can be successfully grown. The comparative low elevation of all this region, the high temperature of the soil maintained throughout the year together with the large expanse of water supplied by extensive wooded marshes, lakes, bayous and many small and large rivers combine to establish climate conditions barring injury to Satsuma trees from any freeze not exceeding that of 1895. No doubt favorable local conditions will permit the Satsuma to be planted 25, even 50 miles north of this line with fair success, certainly a grove 10 to 15 years old if cut down has well paid. It is well to mention, too, that this territory outlined is not subject to northerners, which sweep down from the northwest into Texas; or is it subject to the sudden changes which effect orange culture in Florida. From whatever direction comes a wind it is subject to the humid warming condition which especially characterizes Southern Louisiana; a condition equalling and maintaining a climate well calculated for the successful cultivation of this orange. The severe test of 1895 proved another orange of about equal hardiness with Satsuma, the Kumquat, (described later.) In an experience with orange trees we find drainage, fertilizing and cultivation same as given Peach and Plum is all right, except, for several reasons greater care must be observed to secure well matured trees before frost comes. Young orange trees incline to grow late in the season; so cultivation should stop by the first of September and if new growth appears last of October or first of November, pinch back the new growth and if there is strong tendency to growth a share of roots should be cut with a sharp spade, at the same time slightly lift the trees; very little trimming is needed. The drooping full head secures the most profitable form; but we think the tops should be established high enough to keep the loaded limbs from trailing the fruit too much upon the ground, also some heading in of strong growing limbs, removal of chafing limbs and a thinning, to let in a reasonable amount of sunlight to center of the tree. Several kinds of Scales, appear the worst enemy of the orange. For treatment of scale and other injurious insects we refer you to good works on Entomology. We have again encroached on space in our catalogue to discuss merits of the Satsuma orange and its home for planting; we do this because as in drainage, fertilizers, pear blight etc., each is a subject needing, as we see it, more thorough study; we believe that correct ideas lead in successful fruit raising, that a correct plan by which to work means less cost and far more profit and pleasure than an undefined go-so-no plan. We are confident we have conditions of climate, soil and transportation facilities to paying markets, superior in chances of success than other localities growing like products and we feel a deep interest to aid in a success within our reach and largely profitable. At this date we see no fruit offering

better success and profits than the Satsuma orange, if grown at its home. Of course the peach, plum, pear, etc., each has its season and quality, and will have their place in the family of fruits. We expect to see a large demand for Satsuma orange trees in the near future, as there will be an increasing demand for various well tested fruits; interest is awakening to plant home and commercial orchards.

Satsuma Orange. Its fruit is fully matured by first of October, giving special value as an early shipper. Fruit is a golden yellow, bright, full colored, medium in size, a little flattened, thin skin, which readily parts from the pulp; the segment sacks separate very easy, are of a deep translucent orange color, bursting full of rich, exquisitely flavored juice; very seldom do you find any such remarkable qualities, combining hardiness, great beauty, young bearing; early ripening, delicious quality of fruit, certainty of fruit, is a combination not found in any other Citrus family.

Kumquat Orange. Another fruit treasure from the Japs is the Kumquat or golden orange; equally distinct in tree as it is in fruit from any other orange, and what to planters is of special interest, it stood the freeze of February, 1895, unharmed, as did the Satsuma. The tree is more dwarfish than the Satsuma, and being further dwarfed by budding upon the Trifoliata stock, it might properly be called a bush; it may easily be kept in bush form; if allowed to grow will attain a height of 12 to 15 feet. The tree has a compact head, slender branches without thorns, leaf small and bright green, narrow, almost lanceolate, the whole delicate make-up of the tree presenting a pretty contrast to the more massive beauty of the Satsuma. The tree bears at two years, and abundantly thereafter. One grower reports a tree 6 feet high and 5 feet through, bearing 2000 fruits last season, and this was not uncommon. There are two varieties of fruit, but the trees appear identical; the Negama is mostly grown; it is golden yellow, averaging $1\frac{1}{2}$ inches long by 1 inch through. A distinguishing character of the Kumquat is, the rind is ate with the pulp; the rind is delicate in structure, sweet and spicy, the pulp tender, slightly acid; the entire fruit is ate with lively relish. The Marumi differs from the Negama only in size and form; it is round, about one inch in diameter. One can hardly conceive of two more ornamental trees for lawns or parks, than the Kumquat and Satsuma orange trees. And when in due season they are bedecked with their golden fruits, who would not wish a spot of earth his own upon which to grow them. The Satsuma and Kumquats, reliable for home use and reliable as a money maker, plant them.

Figs.

The increasing interest in fruit planting is showing itself in planting figs, a fruit at home throughout all the Gulf belt, and yet with only here and there a tree or clump of trees in evidence of what Nature is ready to do for us if we will only plant and care for. The fact that the fig can be grown only in a small section of the United States, and that as a canned fruit it is the choicest in quality, and highest in price of all canned fruits, is stimulating planting for canning. It is in evidence, too, that by use of the Poney Refrigerator, green fruit can be profitably placed in any northern market. It is supposed the fig can be easily grown from cuttings, which is true; but the tendency of this tree to grow late in the fall, or during warm spells in winter to start growth, makes it liable to be injured by frost. This is a difficulty in attempting to plant an orchard. Varieties and location should therefore be carefully considered. The winter of 1895 killed most kinds of fig trees in the more northern range of fig growing. The Celestial variety came through practically unhurt at Hammond; the Brown Turkey was injured, while other sorts, unless favored by age and location, were destroyed. The better the wood of the tree is matured in the fall the better it withstands injury from frost; to this end push growth the first of the season, and withhold all help at growth the latter part. If there appears a tendency to start growth during frost season, with a sharp spade cut down several places among the roots, at the same time slightly lifting the tree; this will, for the time, arrest growth. And probably it is quite advisable for the first two winters to bank earth up about the stems, and wrap the top with sacking. As to drainage, the fig is no exception to most fruit trees—good drainage is necessary. In the use of fertilizers, Bulletin No. 5 of Department of Agriculture, D. C. advises: "Excessive use of nitrogenous manures should be avoided, as the tendency of such fertilizers is to produce a soft growth too easily injured by the winter. The piney-woods soil of the south is deficient in phosphoric acid, and this should be a strong ingredient of all fertilizers used in piney-woods regions." Bulletin No. 20 advises against "excessive use of nitrogenous fertilizers as producing a soft, succulent root growth favorable to the attacks of the 'Nematode'—a small worm destructive to fruit trees." Also "thorough drainage and use of tobacco dust mixed with unleached ashes or lime, etc." That is, potash and phosphoric fertilizers should largely predominate in the culture of fig trees. Fertilizers should be applied about the collar of the trees in December or January. No mulching at any time of the year; proper cultivation is the proper mulching. Very little trimming for figs. We offer a few reliable kinds:

Celestial. Stands at the head for hardiness, fine quality and a certain crop producer. For canning or eating from the hand it is probably the best fig grown. Size, small, pear-shaped. Color, dark violet amber, thin skin, meat deep rose color, fine sweet flavor.

Brown Turkey. Averaging larger than Celestial, and quite similar to Celestial in tree and fruit. Quality good and a good bearer.

Brunswick. A large fig, pear-shaped, with one cheek larger than the other; skin pale amber; an early bearer and early to ripen; quality fairly good.

Lemon. Medium to large; yellow; sweet; profuse and early bearer; a desirable variety.

Japan Persimmon.

Another treasure from Japan; tree a beauty; fruit much larger and more valuable than native sorts. As to this fruit it is now satisfactorily settled—it is a success in the south. The tree is perfectly hardy, and the fruit is fast becoming popular, especially kinds that can be eaten while hard. The tree is very ornamental with its large rich foliage and fruit, like oranges. It blooms late, therefore a sure bearer. High prices are already obtained for this fruit in the northern markets. By selection of varieties, fruit can be had from September to January. Plant Japan persimmons. Varieties in order of ripening are:

Zengi. Small, skin yellowish red, flesh dark and good; edible when hard.

Yemon. Large, flat, tomato-shaped; skin light yellow to dull red; flesh deep dull red; astringent until it begins to soften; quality fine.

Hyakume. Large to very large; somewhat flattened at both ends; skin light yellow, nearly always marked with rings and stripes at apex; flesh dark brown; sweet, crisp and mealy; not astringent while still hard; good keeper, and one of the best market sorts.

Yeddo-ichi. Large, smooth, regular skin, dark red with heavy bloom; flesh very dark brown, rich, sweet; good to eat when hard; tree a great bearer.

Okame. Large, with well defined quarter marks; skin orange yellow with delicate bloom; loses astringency as fruit softens; fine quality.

Costata. Medium-sized, pointed four sided, flesh light yellow; astringent until ripe, then fine; the most ornamental tree of all persimmons; rapid, upright grower; large, luxuriant leaves, making it an ornament for lawns or parks.

Tsuru. Large, pointed; skin bright red; flesh orange yellow; astringent until fully ripe, then of good quality; latest of all to ripen.

Apples.

Requires deep drainage and free use of mineral fertilizers—lime, ashes, salt, etc. If given reasonable care there are a number of kinds of apples which prove reasonably satisfactory in many places on the Gulf coast, and if not so much at home as farther north, it is very satisfactory to grow and have the apple. We give a list proven good from Florida to Texas in the order of ripening.

Yellow Transparent. This tree is a sturdy but dwarfish grower, well adapted to small gardens, a young and good bearer; fruit good size, rich, juicy, subacid flavor.

Red Astrachan. A healthy growing tree; fruit good size, dark red with heavy bloom; flesh juicy, rich, acid, successful.

Carolina Watson. This tree a strong, spreading grower, and unusually prolific; fruit large, conical, green with dull stripes and light red cheek; flesh sweet, rich, perfumed.

Jennings. A tree of vigorous growth, open spreading top, heavy bearer; fruit large oblate, color green; flesh white, subacid, juicy and good. A Florida apple that has done well farther south than any other apple in that state.

Yellow Sweet. From Southeast Texas; large, a good bearer, and a good apple anywhere.

Yellow Horse. A strong growing tree, and early bearer; fruit especially fine for cooking; a well tested variety.

Lincoln. A Southeast Texas fruit; fruit large and smooth; flesh cheesy, very rich, subacid, excellent.

Wealthy. Tree a strong, upright grower; bears young; fruit large, smooth, well covered with red and striped flesh, juicy, crisp, subacid, of very satisfactory quality.

Wolf River. This tree a rather slow, stocky grower, but healthy; fruit very large and uniform; smooth, yellow ground, red cheek; flesh juicy, crisp, mild, subacid; fine eating, cooking or market apple.

Bismarck. From New Zealand; dwarfish; finely suited for small grounds; remarkable for bearing large fruit on 2 and 3-year old trees; fruit large, yellow, with red cheek; flesh tender, mild, subacid, a fine table and market fruit.

Shockley. A tree very erect and vigorous, exceedingly productive, and bears very young; fruit medium, uniform, conical, yellow with bright crimson cheek; flesh firm, sweet or subacid, with good flavor, a favorite in the south.

Ben Davis. This tree a strong, upright grower, and a very early bearer; fruit large, greenish yellow, striped and mostly covered with red; flesh pleasant, subacid, of good quality; a well tested southern fruit.

Quinces.

Chinese. A most extraordinary fruit, of immense size, often weighing two pounds and more; a strong, quick growing tree, and appears the best adapted to the Gulf coast of any quince.

Champion. Fruit large, fair and handsome. Cooks tender as an apple without hard spots; delicate flavor; tree a strong grower and bears young.

Orange. Large, round, a rich golden yellow, much esteemed for preserving.

Pomegranates.

Spanish Ruby. The largest and most prolific of fruiting varieties; perfectly hardy through all the Gulf coast. It is a fruit without disease, and possessed of a number of culinary uses. As an ornament for grounds, the make-up of tree, bloom and fruit of the pomegranate is desirable. We also cultivate a sweet pomegranate which we consider very fine.

Grapes

Should have deep drainage, good soil and cultivation. Any manures used about grape vines should be light in nitrogen, and strong in potash and phosphoric make-up. Early cultivation should be given, especially thorough as fruit approaches full size. We do not believe the stake or short trellis forms of holding vines good as an arbor over which the vines can have free growth. Pruning should be mostly done in December, cutting away to establish two to three strong vines to a root. But few northern grapes are suited to the Gulf coast belt. There are a number of southern native grapes and their seedlings that do well, especially some seedlings originated by T. V. Munson, of Denison, Texas. Our list is limited to the best proven varieties for southern planting in order of ripening.

Presly. The earliest good grape, vine strong, healthy; dark green leaves; prolific, always setting a full crop; cluster and berry like the Delaware; extra early market grape, free from all disease.

Brilliant. Vine vigorous, hardy and very prolific; berry large, translucent red; clusters large and compact; no finer early market and table grape.

Shelby. A beautiful yellowish white, above medium size; vine strong, very prolific and very fine quality.

Delaware. One of the best known and best liked of all grapes; bunches medium, compact; berries small, sweet, juicy, rich.

Niagara. Strong growing vine and very productive; bunches medium to large; berries large, pale green with

whitish bloom; flesh soft, tender, sweet, and very successful throughout the south.

Goethe. Vey healthy, strong grower and heavy bearer; medium to large bunches; fruit large, translucent red; flesh sweet, vinous, juicy, with a delicious aroma.

Delicious. Vine vigorous, free from disease, large clusters, berry medium, black, finest quality.

Gold Coin. Vigorous, hardy, productive; clusters medium, shouldered; berry medium to large, rich golden yellow flesh; juicy and becoming sweet when ripe.

Bertrand. Native of Georgia; an immense grower and bearer; bunches very large, berry medium and a dark purple; meat sprightly, sweet, rich.

Herbemont. A supposed native of the south. Remarkable for vine and fruit; bunches very large, long, shouldered and compact; berry small, black, with blue bloom; flesh juicy, sweet, high flavored.

Marguerite. Vine vigorous, free from disease; clusters medium to large, shouldered; berry medium, dark purple; meat juicy, melting, first quality; the latest of all grapes to ripen.

Southern Muscadines.

Flowers, large black. **Thomas**, very large black. **Scuppernong**, large, brownish yellow. The male muscadine should be planted with these to secure a yield of fruit.

The Strawberry.

The queen of fruits on the vine, the table, or on the market, and largely the money crop of fruit sections in the south. Within a few years fungous and insect pests have caused unusual loss in growing this fruit. We believe this result comes largely from an increased use of cowpeas and nitrogenous fertilizers, which produced conditions of soil and plant suited to the development of fungous, microbes, etc., which we doubt if a perfectly healthy plant can be harmed by such pests. However, perfect health does not exist in vegetable or animal life, but methods of subsistence in either case may help or injure health. The North Carolina Experimental Station gives the following formula for making fertilizers for vine plants: Potash, 10; Phosphoric Acid, 5; Nitrogen, $2\frac{1}{2}$. That is, the best fertilizers for strawberry culture is one rich in all elements of plant food except stimulating nitrogen. Thorough drainage, with thorough cultivation, combined with use of such a fertilizer, presents to us the main helps for success in growing strawberries. We offer a list of plants suited to home gardens, and producing the best shipping fruits, according to the best information we have as to quality of plant and fruit, and adaptation to southern soil and climate:

Excelsior. Heads the list of earlies for the south. The strawberry specialist, J. C. Bauer, of Arkansas, ranks it better than Lady Thompson. Its general success south where tried, warrants the conclusion as best early.

Lady Thompson. The last year has added still greater credit to the great productiveness of this berry. It thrives and produces where many other highly prized sorts fail entirely. Probably no other berry in the south has won such fame in so short a time as Lady Thompson.

Hoffman. Deserves a place yet among the best southern sorts; large, dark red, early; stands summer heat.

Hood River. Large, round, brilliant red, very productive; of great beauty and keeping qualities; an early berry.

Dollar. A California berry renowned as a great shipper; early in season; plant a luxuriant grower; fruit large, lustrous, red color, somewhat conical, with a spicy, luscious flavor.

Mexican. A Texas grower says: "Tested here for two years. In plant, size, beauty and quality of berry, unexcelled." Foliage remarkably strong, well protecting fruit against frost; one of the largest berries known; fruit slightly conical, brilliant red, with a rich, sweet, aromatic delicious flavor; because of its deep-rooted, strong stools, will maintain a splendid bed for several years.

Star. A new seedling, making fame wherever planted. Of large size, great beauty, and finest flavor; good shipper; taking best prices in the open market.

Clyde. A stout, vigorous plant; berries large, regular in shape, vivid scarlet color; a great producer.

Bismarck. Plant a strong, stocky grower; fruit large, and fine shipper; very productive.

Brandywine. Does well on great varieties of soil. Plant very vigorous and healthy; ripens its fruit gradually, but produces a large crop; quality superb for table or market.

Gandy. A safe, general purpose, late berry; plant is strong, vigorous, fruit large and fine.

Aroma. A fancy late berry; a good yielder of large, delicious fruit; plant vigorous.

Mulberries.

Hick's Everbearing. Very prolific; continues in bearing three to four months; excellent for poultry and hogs.

Stubbs. A very superior sort discovered in Georgia 25 years ago. Tree very thrifty, with large leaves; fruit large, black, vinous, excellent, a great bearer; fruit lasts two months.

Travis. A new introduction, a magnificent tree, uniform, rapid, symmetrical growth; the compact head makes a dense shade, very ornamental; large, luscious fruit, and lasts two months. It promises to prove the best of all mulberries.

Raspberries.

We believe by right selection and care, good success can be had with raspberries, blackberries and dewberries. Select strong growing sorts, give good drainage, high cultivation and fertilizing. Especially give thorough cultivation during heat of summer. Plant in continuous rows, trim to keep out weak stalks, and give reasonable light and air. Put up supporting racks.

Shaffer's Colossal. A rampant grower, immense both in cane and fruit, and especially adapted to the south. Berries very large, purplish color, soft for long shipments, but especially fine for canning, jelly, etc.; juicy, rich subacid.

Columbian. Even stronger than Shaffer's Colossal, which it resembles in fruit and plant; fine for table, canning or jelly.

Blackberries.

Dallas. A native of Texas, where it is superior to any of many other sorts. Strong growing bush, fruit unusually large and delicious; continues in fruit a long time.

Dewberries.

Austin. Another fine fruit from Texas; vines unusually strong, and fruit of largest size and finest quality; should be supported by a low trellis, over which it can climb.

Nut Bearing Trees.

Almond. Soft shell; the almond of commerce; tree like the peach, and does well where the peach thrives.

Chestnut. Japan Mammoth. Nuts sweet, fine flavor, and of immense size, the burrs sometimes containing as many as five large nuts. Commences to bear in 2 to 3 years from seed.

Walnut. Japan. Nuts form in clusters of 15 to 20; meat of the best quality, and can be removed entire. The tree is a rapid grower, and makes a magnificent spreading top; leaves large and handsome.

Pecan. To be sure of large paper-shell nuts, one must plant grafted trees. Fine nuts can be had by planting select paper-shell seed. We are growing seedlings from

a large soft-shell type secured from trees which are growing by themselves, and therefore the nuts are quite sure to produce a fine quality of fruit.

Grafted Pecans.

The Rome. Largest of all; round at one end, pointed at the other.

Eggshell. A large, oval nut, round at both ends. The thinnest shell of all.

Centennial. The most prolific, long, thin shell.



ROSES.

Our Specialty.

We are giving attention to growing roses, and believe we have in this Southern Louisiana the "Italy" of America in natural conditions for growing roses. With us a strong clay with a mingling of sand, gives a basic soil which, by drainage, proper fertilizing and tillage, grows the finest of rose plants. We do not offer a long list, but think you will find a list to admire.

Select Hybrids.

Magna Charta. (Hybrid Perpetual.) Bright, clear pink, flushed with violet crimson; very sweet; flower extra large; fine form; double and full; a free bloomer.

General Jacqueminot. (Hybrid Perpetual.) Very large, globular, excellent; a free bloomer, unsurpassed in its clear, rich crimson scarlet color.

John Hopper. Bright glowing pink, fine, large, showy and fragrant.

Paul Neyron. Perhaps the largest hybrid rose grown; a strong and healthy grower, of a dark rose color, good form, and blooms well during the summer.

Perle d'Or. Not yellow, as its name indicates, but of a light buff shade; good form.

Prince Camille de Rohan. Moderately double, of a dark crimson, forms a fine bud and is of good habit.

Fisher Holmes. Scarlet, shaded darker scarlet.

Alfred Colomb. Large, full, round flowers, of a bright cherry red, turning to a beautiful crimson.

Baronne Prevost. Deep rose.

Anna de Diesbach. Bright rose color, very large and showy; particularly fine in bud; flower slightly cupped. A vigorous grower, and one of the best.

Marshall P. Wilder. Flowers very large, perfectly double and of good substance; bright cherry red color shading to crimson. Plant a clean healthy grower, and a very free bloomer.

Select List of Tea and Everblooming Roses.

Maman Cochet. A beautiful tea rose. The growth is vigorous, with rich healthy foliage and extra large flowers on long, stout stems, very double and simply exquisite when in bud or half bloom. The color is a deep rosy pink, the inner side of petals silvery rose; makes charming bunches of long-stemmed flowers when cut. Fine for either pot culture or outdoor planting.

Safrano. Bright apricot yellow, changing to orange and fawn, sometimes tinted with rose; valued highly for its beautiful buds; fragrant and a rampant grower; exceedingly profuse in bloom, and deliciously tea scented.

Agrippina. (China.) Rich, velvety crimson, beautiful bud; for bedding is unsurpassed; few roses are so rich in color.

Catherine Mermet. One of the finest roses grown. The buds are very large and globular, the petals being recurved and showing to advantage the lovely bright pink of the center, shading into light creamy pink, reminding one of La France in its silvery shading. A strong grower and fine bloomer.

Mad, Pernet Ducher. A robust, vigorous grower and profuse bloomer. A well-formed bud, quite long and of distinct shape and form; color light canary yellow. The first yellow hybrid tea.

Duchesse de Brabant. Few roses equal this in freedom of flowering; none surpass it in either fragrance or vigor; the flowers are rather loose when open, but are rich and peculiarly colored; color rose heavily shaded with amber and salmon.

The Bride. A lovely, pure white, very fragrant rose, admirably adapted for forcing. The buds have more substance than Niphetos, are very full and double, and possess the good characteristics of Catherine Mermet; strong plants.

American Beauty. (Hybrid Perpetual.) An excellent hardy rose for permanent planting. Fully equal to General Jacqueminot in hardiness. Larger in size of bloom. Very double and of a fine crimson pink. Also considered the finest red rose for forcing, and always bringing the best price in the largest flower markets.

Souvenir de la Malmaison. (Bourbon.) A noble rose; flower is extremely large and double; color flesh white, clear and fresh. Has been considered the finest Bourbon rose for many years. Its great beauty in the fall makes it the finest of all roses at that season. A flower that is universally popular, and always will be so.

Papa Gontier. A magnificent red tea. It is a strong grower, with fine healthy foliage; the buds are large and long, with thick, broad petals of a dark carmine crimson color, changing to a lighter shade in the open flower. An excellent winter blooming variety, and one of the best for outdoor planting, opening up the flowers in beautiful shape.

Fiammetta Labonnand. White Papa Gontier. It is conceded by all that Gontier is one of the finest and the most profuse bloomer of all the red tea roses; this new variety is identical with it in every way except color; it has the same habit of growth, freedom of bloom and size and shape of flowers, which in this are a beautiful satin white delicately tinted with light rose. A fine, large-sized flower with elegant shell-like petals; very handsome buds.

Etoile de Lyon. The finest yellow tea rose for outside planting and one of the hardiest of the tea section. It blooms very freely, and every flower is a gem; very large and fully double. Well established plants produce flowers equal to M. Niel in size. Color deep chrome yellow.

Moss Roses.

John Cranston. Deep crimson, very double.

Countess de Murinais. A large pure white, beautifully mossed.

Henri Martin. Dark pink.

Luxemburg. Large, very mossy, fiery carmine; a luxuriant grower and free bloomer.

Ever-Blooming Climbing Roses.

Climbing Meteor. A grand new velvety crimson perpetual flowering climbing rose. Equal to Gen. Jacqueminot in deep rich color and size of flower. A color never before heard of in climbing roses. We have sports of the dark colored hybrids that are called climbers, but are in reality only strong growing bush roses. In Climbing Meteor we have a rose of strong, true climbing habit, that under favorable conditions makes shoots 15 to 20 feet long in a single season. Very free flowering, producing in profusion all through the growing season its rich, dark velvety crimson flowers, perfectly double and in size and finish equal to any of the best hybrid perpetuals.

Mary Washington. This is one of the hardiest of the ever-blooming climbers. It is a remarkably free bloomer, producing flowers in large clusters. It blooms profusely when very small, and does not make a large growth the first year, but the second year throws up strong canes that make splendid pillar or trellis plants, covered with bloom throughout the season. Flowers

medium size, pure white and very fragrant.

Climbing La France. Identical with La France in every respect, except in style of growth, which is of a strong climbing habit, making it an excellent pillar or porch rose. It is a sport of the La France, and retains its charming peach color and fragrance.

Wm. Allen Richardson. Orange yellow, center copper yellow, very rich. A strong, rampant grower, one of the best.

Chromatella, or Cloth of Gold. Deep yellow; an old and favorite variety; shows its deep color best when budded.

Climbing Niphetos. This new variety is a sport of Niphetos, and is identical with it except that it is a strong, rampant grower, making shoots 12 to 15 feet in length in a season. Flowers large; long pointed buds; color pure white, outer petals sometimes tinged delicate pink. A grand climbing rose for the South.

Reine Marie Henriette. Extra large, finely formed flower; very full and double, richly tea scented; color glowing crimson.

Marechal Neil. Beautiful deep yellow, very large, full, globular form; sweet scented, free-flowering; one of the finest yellow tea scented roses yet introduced. A good climbing rose.

Empress of China. A new free flowering climbing rose of Chinese origin. The plant is a strong, healthy grower, making a fine specimen in a very short time, and produces its medium sized flowers in the greatest profusion; comes nearer being a perpetual bloomer than any hardy climbing rose known. Color soft red, changing to light pink when fully open.

Crimson Rambler. The introduction of this sterling variety makes the greatest advance in climbing roses that we have had in the last quarter of a century. Perfectly hardy; wonderfully free flowering; rich glowing crimson; intensely bright and vivid in color. The plant is a strong, rampant grower, making shoots 10 to 12 feet long in a season after the first year, or when well established. The flowers are produced in large trusses, pyramidal in shape, often 25 to 30 in a cluster, fairly covering the plant from the ground to the top with a mass of bright glowing crimson. The color is simply superb, and is retained unfaded, or without showing any of the purplish tinge so often seen in dark roses for an unusual length of time. For walls, pillars and porches, or any other place where a hardy climbing rose is wanted, nothing can be more desirable or beautiful. If grown in beds and pegged down, it makes a brilliant display with its profusion of bloom, large clusters shooting out from each joint. As many as 300 blooms have been counted on a single branch.

New Japanese Creeping Rose.

Memorial Rose.

Rosa Wichuriana. A trailing species of very rapid growth, creeping on the earth almost as closely as the ivy. The flowers are produced in greatest profusion in July, after the June roses are past, and more sparingly throughout the season. They are single, pure white, with yellow stamens, fully two inches across, with the strong and sweet fragrance of the Banksia Rose. For covering the ground among shrubbery and rocks it has no equal. Its almost evergreen character makes it acceptable at all seasons of the year, but it is especially beautiful when it is covered with its long showy bunches of white blossoms when most other roses are gone. Excellent for cemetery planting, as it soon adapts itself to almost any kind of soil, and will grow and do well either in shade or sun. There is nothing better for covering embankments, mounds or rockeries.



Shrubbery.

Hydrangea Paniculata Grandiflora. Hardy and easy to grow; flowers in large panicles; creamy white when fruit opens changing to pure white when fully out, and to pink and bronze in age; flowers from July to November. Cut back one-half previous season's growth before starting in the spring blooms on new wood. Very appropriate for cemetery planting, and planted in groups upon the lawn looks beautiful.

Lilac, Common. (*Syringa Vulgaris*.) Sturdy bush, purple bloom.

Lilac, Common. (*Syringa Vulgaris Alba*.) Sturdy bush, fragrant white. Persian is of more slender growth and finer foliage; flowers purple, in large spikes.

Philadelphus or Mock Orange.

Grandiflora. Strong growing shrub, flowers snow white in great profusion; sweet scented.

Deutzias, Materi. Robust grower; flowers form in large loose racemes.

Gracilis. Dwarf, growing slender limbs strung with blooms in early spring.

Althea. (Rose of Sharon.) One of the most showy and beautiful flowering shrubs, blooming freely during August and September, when there is a scarcity of flowering shrubs. We grow several choice kinds.

Cydonia Japonica. (Japan Quince.) Bright scarlet crimson flowers in great profusion in early spring, and sparingly during summer; dark green leaves.

Cape Jassemine. Well known evergreen shrub.

Crepe Myrtle. Can be kept in bush form or allowed to grow into tree form. Its long continued bloom makes the crepe myrtle specially desirable.

Spirææ.

Bumaldi. Handsome Japanese species, dwarf compact growth, covered during mid-summer and autumn with a mass of bright rose colored flowers.

Van Houtte. Grand as an ornament for a lawn, and when in flower is a fountain of white bloom.

Anthony Materer. Crimson flowers, beautiful dwarf bush. a free bloomer during most of the season.

Weigelas.

Candida. Strong, upright grower, flowers pure white.

Rosa Nana Vangata. Very conspicuous green leaves, beautifully margined with pure white.

Van Houtte. Deep crimson, very prolific in flowers.

Bulbs and Ornamental Plants.

The Canna.

Those who have not seen the late finer sorts of Canna, have a floral treat in store for them. The Indian shot plant of years ago can hardly be recognized as the source from which has come the magnificent canna of today. For continued gorgeous semi-tropical effect, in bloom and foliage no other herbaceous plant can rank above the Canna. In bloom soon after planting, it continues to bloom all summer until frost; it loves the hot sun and southern showers, and when introduced will soon be seen in single plants or in groups in open spaces or cozy corners on lawns and city parks.

Surprise. A gem among cannas; very dwarf compact habit; flowers of largest size, bright crimson scarlet, distinctly and evenly bordered deep golden yellow; free and continuous bloomer.

Austria. A sturdy rank grower, forming large stools covered from the ground up with deep green foliage; tall spikes of golden yellow flowers shoot up from early spring until frost.

Italia. Strong grower with heavy green foliage; flowers bright orange scarlet with broad golden border, large size and nicely ruffled petals.

America. The first of this class with bronze foliage; flowers very large, deep orange red, flamed and striped with deeper shades; distinct in flower and foliage.

Florence Vaughan. Conceded by all who have seen it to be the finest yellow spotted canna. Flowers very large, of the most perfect form, with broad overlapping petals, nicely rounded at the ends. Color brilliant yellow, spotted with bright red. A strong robust grower, and flowers very freely.

J. D. Cabos. Dark greenish maroon foliage, with a bronze, metallic lustre; flowers bright orange or apricot, sometimes brightened with a pinkish tinge. One of the most distinct of the cannas. A fine grower and a very early, profuse, continuous bloomer. Flowers of the largest size, and of a color that is very pleasing.

Charles Henderson. A splendid compact dwarf grower, throwing up erect compact heads of bloom of large size; the individual flowers are among the very largest. Color bright crimson, center of the flower marked with golden pencilings. This is one of the very handsomest varieties, and where a mass of bright crimson is wanted, we know of nothing better.

President Carnot. Orange scarlet, slightly shaded pink. Good sized trusses of large flowers, foliage deep chocolate maroon; one of the best of the dark-leaved sorts, distinct and fine.

Madam Crozy. Flowers of a dazzling crimson scarlet, bordered with golden yellow; a marvelous and rich combination of colors. The plant is of vigorous growth, yet very dwarf in habit, rarely exceeding four feet in height. The foliage is of rich cheerful green, and very massive. The flowers are produced in large branching stems which are closely set with bloom, each stem being really a bouquet in itself. Remarkably free flowering, and can be had in bloom the year round.

Dahlia. Single and double; pompon and cactus varieties.

Pæonies. Tree pæonie and herbaceous varieties.

Dahlia. In assortment.

Double Tube Rose.

Amaryllis. Equestre and Johnsonii.

Caladum Esculantum.

Calla Lily. Ethiopica and Little Gem.

Lily Auratum. Gold banded.

Speciosum Rubrum. White with red spotting.

Speciosum Album. Pure white with slight tinge of rose.

Coridion Lily. Yellow, blooms early and late.

Bermuda Easter Lily.

Spider Lily. (Native.)

Crinum. Kirky; largest of bulbs; bloom white with center stripe of reddish purple; fine fragrance.

Bulbous Orchid. Throws up cane-like stalks with long lanceolate leaves placed alternate and opposite on stalk; a cone-like bud forms at terminus of stalks and about middle of August begins to throw out pure white fine scented blooms, which continue to appear until frost.



Grasses.

Eulalia Zebrina. A striking and distinct plant with variegated foliage, white marking across the long bright green leaves at spaces of a few inches; forms a dense clump of leaves and canes, the latter surmounted with a loose, light silvery gray plume.

Eulalia Verigata. Not so robust, but similar to Zebrina in general make-up. The long, narrow leaves are striped white and green, plume darker than Zebrina.

Eulalia Univitata. Narrow green leaves with white mid-rib; makes a very graceful single plant; fine plume.

Lemon Grass. (*Andropogon Citratus*.) Yields a perfumed oil; very handsome for borders or single specimens.

Arundo, Donax Variegata. Beautiful bamboo reed; tallest of all variegated grasses; foliage beautifully striped white; leaves broad; a dense heavy plume of dark silver gray color.

Yucca Filamentosa. (Adam's Needle.) Well known.

Spanish Dagger. Also well known.

Japan Iris. In variety.

Chrysanthemums. Collection of 12 extra sorts.



Ornamental Trees.

Texas Umbrella Tree. Assumes a dense spreading head resembling an umbrella.

Prunus Passardii. (Purple-leaved Plum.) Retains its deep purple color through the hottest sun, and its leaves until mid-winter.

Crape Myrtle. As a small tree is beautiful; the peculiar color of the bark of the stem, the shrubby-like formation of limbs, bright green leaves and masses of fringed flowers which bloom during most of the summer, combine to make the Crape Myrtle an ornament for any ground.

Castata Persimmon. Well deserves a place among ornamental trees. The tree is distinct from any other of its kind, a rapid upright grower, full compact head, leaves large, dark green with a luxuriance excelling the finest orange leaves; fruit beautiful as an orange, and fruit and foliage hang on the tree until well in the winter.

Flowering Peach. (Red and White.) A beautiful tree; in bloom three to four weeks in early spring; does not produce fruit.

Flowering Willow. (*Chilopsis Linearis Alba* and *C. L. Grandiflora major*.) Beautiful hardy trees, native of a hot dry climate, and grow on any soil, blooming the entire season.

Privet. (*L. Amurenses*.) Makes the most beautiful hedge of all privets, and when grown in single specimens produces a delicate, compact semi-weeping tree of very attractive appearance; evergreen with white flowers.

Privet. (*L. Japonicum*.) Of fast growth; fine for hedge or single specimens; more upright with heavier leaf and stem than *Amurenses*; produces large bunches of cream white flowers, followed by purple berries; gives excellent shade.

Loquat. (Japan Medlar.) A beautiful medium-sized broad-leaved evergreen tree; thick, leathery leaves with dark blue-green shade covered with brownish down on under side.

Enonymous Japonica. Splendid evergreen, strong growing bush, with rich dark green foliage; makes a beautiful single specimen small tree; whitish flowers in summer, and fine scarlet berries in winter.

Citrous Tripoliata. The hardy Japan orange, standing zero cold perfectly; makes the complete defensive hedge, and as a single specimen it is unique; limbs of peculiar make-up, with green bark, giving appearance of an evergreen tree; in spring it is thickly covered with large white flowers, followed by golden fruit, which hangs on the tree all winter.

Pendulous Trees.

Teas Mulberry. Has proved perfectly adapted to southern soils; probably the most graceful weeping tree in existence; umbrella-shaped head; slender, willow branches drooping to the ground; full, green foliage maintained during the hottest summer; admirably adapted for ornamenting large or small grounds, or for cemetery planting.

Cut-Leaved Weeping Birch. The most desirable stately lawn tree of all, and fine for streets or avenues; trunk straight and finely tapering, and white as snow. The long, slim branches form clumps which droop and wave

in a lovely manner; the foliage is delicately and deeply cut, coloring finely in the fall. This grand tree has done finely with us.

Wier's Cut-Leaf Weeping Maple. Of rapid growth; remarkable and beautiful dissected foliage; limbs slender and drooping, giving a very graceful appearance; while it makes a large tree it bears any amount of pruning, and may easily be adapted to small grounds; makes a very noticeable tree standing alone near the side or at the rear of grounds, or near ponds of water.

Texas Weeping Willow. A grand, quick growing tree, with long delicate drooping branches thickly set and pendant with dark green lanceolate leaves; a pleasing sight standing alone or to the rear or sides of lawns, or grouped about ponds of water.

Large Growing Trees for Parks, Drive-ways and Streets.

Carolina Poplar. One of the most rapid growing trees known, with large glossy serrated deep green leaves; tree of pyramidal form, spreading top and dense shade; specially adapted to large cities, as smoke or gas has no bad effect upon it; to be preferred to any evergreen tree for street planting, as it defoliates during winter, permitting the streets to dry while the continuous shade of the evergreen tree keeps the streets damp and muddy during the rainy months of winter.

Catalpa. (*Speciosa*.) More upright and symmetrical than the common catalpa, and blossoms earlier; large heart-shaped, downy leaves, and compound pinicles of white flowers tinged with violet and purple; a rapid grower.

Maple. (*Ash-Leaved*.) A fine, rapid growing maple, with handsome light green pinnated foliage and spreading head; forms a dense shade, desirable for drive-ways and street planting.

Maple. (*Silver-Leaved*.) Foliage bright green above and silver white beneath; one of the most rapid growing trees; easily transplanted; largely used for street and park planting.

Magnolia. (*Grandiflora*.) Well known; the king of broad leaved evergreens.

Magnolia. (*Acuminata*.) A noble and beautiful tree, with very large leaves and flowers of superior beauty.



Hedge Plants.

Citrus Trifoliata. The hardy Japan orange; will stand zero cold; makes the most perfect defensive hedge

known; every limb thickly set with strong sharp thorns; specially fine for division fences, for the rear of lawns, and to enclose gardens. The bark of the limbs is bright green, and gives the hedge an evergreen appearance; is gay with white blooms during spring, followed by fruit which becomes a golden color, and hangs on the limbs in the winter.

Privet. (*Amurenses*.) Makes the most delicate and beautiful hedge; the finest privet known for hedge; especially ornamental for borders of walks and drives; evergreen.

Privet. (*Japonicum*.) Of fast growth, more upright, with heavier leaf and stem than *Amurenses*; well adapted for heavier ornamental hedge upon borders and rear of grounds; evergreen.

Madam Plantier Rose Bush. Where one desires a rose hedge, there is no rose bush superior to the Madam Plantier; fine leaf; it holds its green foliage during the hottest summer until well into the winter; during June it is loaded with very double white flowers, which appear occasionally during the summer; it will stand pruning equal to the Privet.

Enonymous Japonica. Strong growing evergreen, which stands pruning admirably; rich, glossy, dark green foliage, it makes a sturdy luxuriant hedge.



Evergreens.

How to Plant Red Cedar, Chinese Arborvitæ and Irish Juniper.

NUMBER OF PLANTS TO THE ACRE.

To have the right distance apart, divide the number of square feet which is in an acre (43,560) by the number of square feet devoted to each plant—say $1\frac{1}{2} \times 4$ feet, which is $4\frac{1}{2}$ square feet. Thus, $4\frac{1}{2}$ as a divisor and 43,560 as a dividend, would give 9,680 as a quotient—the number of plants to an acre.

Distance Apart to Plant.

Circumstances of soil, climate, and relative size of tree among trees of its own kin, may vary distance to plant. As a general rule we suggest for Apple, Peach, Pear, Satsuma Orange, Muscadine Grape, Japan Quince, 20x25 feet apart. For Plum, Persimmon, Fig, Quince (except Japan), 16x20 feet apart. For Pecans, Japanese Walnut, Japanese Chestnut, 30x40 feet apart. For

Grapes (except Muscadine), 6x8 feet apart. For Black and Red Raspberry, 4x6 feet apart.

Spraying, Etc.

Numerous experiments have proven the good benefits from spraying. As before, we again refer you to published works and bulletins discussing the subjects of spraying, insects, etc. These subjects are too extensive for this little book. Bulletins from the various State Experimental Stations, and from the Agricultural Department at Washington, D. C., can be had by dropping them a postal card stating your wish.

Planting.

If you propose to plant fruit trees, try very hard to have your ground all ready to plant as soon as the trees get to your place. If not ready, **HEEL IN** the trees by first untying the bundle and then placing the roots in a trench, and covering them completely with fine earth. Then get them planted in the orchard as soon as possible.

Best Time to Plant.

Any time when the trees are in a dormant condition; that is, before the buds begin to start. The German gardner would say, "when the buds start, plant your trees;" and he would be correct enough when trees are handled without any exposure of root, and dry weather follows. December and January is the best time to plant; February is often satisfactory, and March may or may not do.

Preparing the Ground.

It should be done with special reference to **PERFECT DRAINAGE**, and the soil should be made mellow by deep plowing and thorough harrowing, if the ground is poor and needs loosening and enriching.

Composted Home-Made Manures

Should be scattered broadcast, and go under with the plowing, or liberally used about the trees after they are set. Use no manure about roots when setting trees. Manures may be made by composting barn-yard manure, muck, leaves, etc., with muriate of potash, kainite, lime, wood ashes, etc. Use no nitrogenous substances. Such manures can be produced cheaper than commercial manures can be bought, and for beneficial effect in loosening and enriching the soil, is far ahead. Most commercial manures are active present stimulants, producing growth, but unhealthy to plants and deadening to the soil. A farmer might as well drink whiskey for bodily support as to feed his soil with commercial manures only, to sustain its fertility. It is time the delusive talk for commercial fertilizers be shut up by the adoption of the good sense of our farmers of twenty or thirty years ago, who made their farms rich and profitable by the use of home-made manures. Try them.

Why Plant Fruit Trees.

Well, we want them about our homes for their healthful fruits and refining influences, as well as for "the money that is in it." Yes, the healthy, well-developed plum, pear or orange tree, built up with vigorous limbs, bedecked with luxuriant leaves and luscious fruits, is a beauty indeed, fully responding to our desires for the beautiful. Surrounded by fruit bearing orchards, the father, the mother, the son, the daughter take in higher sentiments of life, and infused with living interest, they intelligently care for the health and growth of their plants. Pruning away the sickly parts, removing the dead, replanting with healthy young trees, and realizing that there is no reward without labor, no success without correct ideas, they seek the best in fruits, the best in methods of drainage, in planting, in fertilizing, in cultivation; and, having produced an abundance of choice fruits, more than their home and neighbors need, they take the surplus to towns or cities for those there who cannot grow, but want the fruit, and are willing to pay generous prices for the same. And again, while the trees and fruits of the orchard make

home pleasant, the grower seeks the dollars there may be in the fruit he sends to market. By his skilled labor he has added to the general supply of fruits to be sold, so the gardeners and farmers of our country devote strength of body and mind to produce, and in this great busy field of production comes in the aid of every catalogue of nurseryman, seedsman and florist, of every agricultural paper, every scientific fact determined by agricultural colleges and the experiments of State experimental stations. Indeed, it would seem that the resources of nature to produce fruit, thus appreciated and aided by such an army of thinkers and workers, would make the

PRODUCTION

Of fruits to be transported and sold in open market very large; and so it is. But observe that this large production of fruits—the result of much mental and physical labor by the farmer—has been under the control of the producer up to the time when the fruit must be sold in open market. At this point steps in the transportation and commission companies (theoretically the servants of the producer to pass the product to the consumer, but practically the arbitrary dictators), the first to declare the rates for shipping, the latter to fix the amount that shall be paid the shipper. The producer has his choice, either to not ship and so let the fruit rot at home, or with useless protest receive the unjust sum doled out to him. This is

DISTRIBUTION

As known to thousands. While distribution should aid and co-operate with production for a just system of business, its field of usefulness is monopolized by vast monied organizations, which by law are granted chartered existence expressly to serve the public good; but from the immensity of their resources, augmented by foreign and home capital, all State, or government laws are forced to yield to their greedy march, while they assume absolute control of all avenues of commerce, and push their usurious profits “for all the traffic will bear.” With them “producers be damned.” Shylock, they will have their “pound of flesh,” regardless of human life, and with a leer, like Milton’s “Satan,” ask “what are you (producers) going to do

about it?" A logical question, but one of terrible meaning. Well do we know the power of organized capital over unorganized labor. Well do they know that "ignorance forges its own shackles of slavery." The ballot, conceived in correct ideas, might undo these wrongs, but—we stop. It just occurs to us, "Such talk in a nurseryman's catalogue!" Well, we must further say, send for samples of "The Fruit Growers' Journal," printed at Atlanta, Ga., if you would read up on problems in transportation; and if you would know the power there is in co-operative organization among fruit growers, send for information to the "American Fruit Growers' Union," 53 River street, Chicago. We realize we have stepped over the line, up to which the army of agricultural and horticultural reformers, with few exceptions, stop. Across the line (if they dare look) they will see in the arena of distribution personations of soulless greed, organized and powerful, astride of every force controlling commerce, grabbing to themselves the larger share of values from products sold, returning to the producer a mere pittance for his meagre subsistence. What then? With hands upraised and sanctimonious looks, they exclaim: "It can't be helped; it is the result of politics, awful politics!" "Oh! we can have no politics in agricultural or horticultural matters!" and turning to the defrauded producers, they consoling say, "Times are hard, but be more economical; be more diligent; use more brains; don't grumble; don't bother with politics; work harder and do as we tell you." And lo! the mill of production goes on, and the mill of distribution consumes. "Politics!" Every American citizen is a politician in the true American meaning of the word, and his ballot is his certificate of the fact. He who grows a bushel of potatoes, whether he eats or sells it, is a politician. Any man, native or naturalized, who as a citizen asks this government to protect him in "life, liberty or the pursuit of happiness," is a politician. The Hannas, the Clevelands, the Shermans, are not legitimate politicians, but gamblers in human rights; leaguers with foreign and home anarchists to dominate for autocratic power at the expense of the masses. Ruled by greed for money and power, their souls feel nothing of the God-like desire for justice, which animated the life-work of a Jefferson, a Jackson, or a Lin-

coln. Politics! It is time the silly-sally, the goody-goody, the craven submission to wrongs which is robbing and unmanning the producing classes, transforming freemen to slaves, a free government to a monied oligarchy, be stopped, and political cowardice be set aside for political manhood. It is time the literature of nurserymen, of seedsmen, of florists, agricultural colleges and schools of State and government experimental stations, and all institutions specially intended to do good for the producing classes, were united on a class of literature treating on the problem of a just and equitable distribution of the products of labor, questions pertaining to the actual cost of constructing railroads, actual expense of operating railroads, just tariff rates for hauling, etc., etc., and so on through all the list of agencies pertaining to the distribution of the products of labor. Such are surely educational questions, adjuncts to questions in production, and in every way essential to be known by the producing classes in defense of their political rights; for "knowing their rights they will maintain them."

We wish to say that these ideas, so entirely unusual in a nursery catalogue, are not given space in this little book for novelty or notoriety's sake, but to include in the discussion of fruits the entire field its consideration rightfully embraces—that of PRODUCTION and DISTRIBUTION, and also to call attention to the stumbling block over which most producers and their schools of literary help flounder—"fear of politics." The churches of the day, secret orders, schools of learning, special instructors of labor, etc., largely ignore political effort in staying crimes committed against labor through political measures, which are usurious, unjust, and often cruel. The "Redeemer of mankind," whom all these institutions and men honor and bow to as their moral leader, saw the "spectre" in the temple at Jerusalem, and moved by the spirit of Eternal Justice, he exemplified the true politics to govern his followers and redeem the nations. Filled with a power expressive of His Godhead, he went among the money usurers of the temple; amazement and indignation possessed the money changers, priests, lawyers and doctors, but with burning words of truth, and the scourge of the whip, he drove them hence, declaring "this temple was made for the living God, but ye have made it a

den of thieves." And yet the usurer forgot not his calling; the poor, the widow, the laborer, still remained for his prey; so, combining with Church and State, the "Redeemer was crucified." What think you, laborers and teachers of labor? Shall we learn and practice the politics of "The Christ," or slave-like, submit to the politics of the usurers? Think and judge.

Picking, Packing and Marketing Fruits.

So much depends upon quality and appearance of fruit when placed for sale, that each of the above departments in the handling of fruits can only be mastered by careful attention and experience. The cost of transporting poor fruit is as much as that of good fruit, and probably the commission man will "scalp" no closer on good than on poor fruit. Pick the fruit carefully. If pickers are experienced, most kinds of fruit can be very profitably sorted as picked, and first and second classes placed in separate crates, ready for shipment. As a rule, fruit should be picked when just reaching the first stage of maturity, fully developed in size, and at least some colored, not bullet hard, nor at all soft. California fruit men have arrived at near perfection in picking fruits, designing crates and neatly packing. We shall do well to study their ways of doing business. But bear in mind that growing fine fruits and skillfully preparing it for market, is only a part of the conditions to a sure and profitable business. A closer touch with the consumer, rightful charges in transportation, control of sales in open market, are parts, and important parts in your fruit business. Individual effort to correct abuses in transportation are as "chaff in the wind," and single local organizations can do but little better. Legally organized co-operative associations can do much to help, and we again refer to the "American Fruit Growers' Union," Central Office 53 River street, Chicago, as the strongest combine of fruit growers' associations in America. But the real remedy rests in organization and education, expressed in an intelligent use of that anchor of American freedom, that certificate of individual rights to life, liberty and the pursuit of happiness—THE BALLOT,

So there is "politics in the fruit business."

Our Price List

Is herewith submitted with the assurance that we are not growing and selling goods in competition with that walking sharper, the "tree agent dealer," or that far-fetched, injured, poorly graded stock with which the country is sometimes flooded. We understand the management of nursery business in all of its departments, and pride ourselves on the uniform grading, health and freshness of the goods we deliver. At prices quoted **WE PAY FREIGHT** to any point within 200 miles of Hammond. We study our business, and take pride in rendering every help we can for the successful planting and growing of fruit trees and vines. To this end printed instructions will be furnished to all who purchase of us, and at all times, according to the best of our knowledge, any inquiries as to kinds of trees, methods of planting, etc., will be promptly answered. We shall be one among you in building up this fruit industry, trusting that with good stock and honorable dealing to deserve your support.

Truly yours,

HEWETT BROS.,
Proprietors.



PRICE LIST.

Plums, Peaches, Pears and Apples.

SIZE	EACH	PR 10	PR 100
3 to 4 feet	15c	\$1.25	\$10.00
4 to 5 feet	25c	2.00	18.00
5 to 6 feet	35c	3.00	22.00

Satsuma Orange.

SIZE	EACH	PR 10	PR 100	
15 to 20 inch, Single Stem	25c	\$2.00	\$18.00	} 2 and 3 yr st'ck
15 to 20 inch, Branched	30c	2.50	22.00	
20 to 30 inch, Single Stem	30c	2.50	22.00	} 1 and 2 yr buds
20 to 30 inch, Branched	35c	3.00	25.00	
30 to 40 inch, Single Stem	40c	3.50	30.00	} 3 and 4 yr st'ck
30 to 40 inch, Branched	50c	4.50	40.00	
3 and 4 feet, Single Stem	60c	5.00	45.00	} 2 year buds
3 and 4 feet, Branched	75c	6.50	55.00	
3 and 4 feet, Stocky	\$1.00	8.00	75.00	

Kumquat Orange.

SIZE	EACH	PR 10
10 to 15 inch, Branched	50c	\$4.00
15 to 20 inch, do	75c	6.00

Figs, Quinces, Pomegranites.

SIZE	EACH	PR 10	PR 100
15 to 24 inch	20c	\$1.50	\$10.00
20 to 36 inch	25c	2.00	15.00
3 to 4 feet	35c	3.00	20.00
4 to 6 feet	45c	4.00	30.00

Persimmons.

SIZE	EACH	PR 10	PR 100
2 to 3 feet	25c	\$2.00	\$18.00
3 to 4 feet	35c	3.00	25.00
4 to 5 feet	45c	4.00	35.00

Mulberries.

SIZE	EACH	PR 10	PR 100
3 to 5 feet	25c	\$2.00	\$15.00
5 to 6 feet	35c	3.00	20.00
6 to 8 feet	50c	4.00	30.00

Grapes.

"Munson Grapes," Superior for the South; Presley (best early); Brilliant; Delicious; Gold Coin.

	EACH	PR 10	PR 100	
Marguerite (best late)	50c	\$4.00	\$30.00	} One Year
Others, well tested	30c	2.00	15.00	

No. 1

Strawberries.

New and Choice—Excelsior; Hood River; Mexican;
Dollar.

	PR 10	PR 100	PR 1000
Bush Cluster	50c	\$3.00	
Other kinds	25c	1.00	\$3.00

Raspberries (RED AND BLACK), Blackberries, Dewberries.

Each, 15c Lots of 10, \$1.00 Lots of 100, \$6.00 Lots of 1000, \$20.00

Pecans. (PAPER SHELL SEEDLINGS.)

SIZE	EACH	PR 10	PR 100
8 to 12 inch.....	30c	\$2.50	\$20.00
12 to 15 inch.....	40c	3.50	30.00
15 to 24 inch.....	50c	4.50	40.00
2 to 3 feet	65c	5.50	50.00

Roses. (FIELD GROWN, STRONG PLANTS.)

VARIETIES	EACH	PR 10	PR 100
Hybrids, Teas, Moss, Climbers	50c	\$3.50	\$20.00
Marechal Niel	75c	6.00	

Shrubs.

1 to 2 feet Each 50c Lots of 10, \$3.50

Canna. (VARIETIES—STRONG PLANTS.)

Each,25c Lots of 10,\$2.00 Lots of 100,\$12.00

Dahlia, Pæonia, Bulbous Orchid.

Different Varieties, Each 35c Lots of 10\$2.50

Lilies

IN ASSORTMENT, FIRST-CLASS BULBS, TRUE TO NAME.

Each..... 35c Lots of 10..... \$2.50

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Chrysanthemums, (VARIETIES TRUE TO NAME.)

Each 20c Lots of 10\$1.50

Grasses, (DIVIDED CLUMPS, TRUE TO NAME.)

Each 25c Lots of 10 \$2.00

Japan and German Iris.

Varieties true to name—Each..... 25c Lots of 10.....\$2.00

Ornamental Trees.

5 to 7 feet—Each 50c Lots of 10 \$4.00

Magnolias and Cedars.

30c per foot.

Pendant or Weeping Trees.

5 to 6 feet—Each 20c Lots of 10 \$1.50

Hedge Plants.

1 to 2 feet—Each 25c Lots of 10 ... \$1.50 Lots of 100 .. \$10.00



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